REMARKS

This Amendment, submitted in response to the Office Action dated February 4, 2005, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-24 are all the claims pending in the application.

I. Preliminary Matters

Applicant respectfully requests that the Examiner approve the drawings filed September 6, 2000.

II. Rejection of claims 1-7, 11, 13-15, 17-18 and 20 under 35 U.S.C. § 102

Claims 1-7, 11, 13-15, 17-18 and 20 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Edgar (U.S. Patent No. 5,266,805).

Edgar pertains to a system and method for image recovery. An image is sequentially scanned with infrared, red, green and blue light in order to obtain an infrared 20, red 22, green 24 and blue 26 image of the film. Col. 5, line 62 to col. 6, line 2. The desired image does not appear in the infrared image 20 but imperfections appear on all four of the images 20-26 in a substantially equal manner. Col. 6, lines 32-38. A subtractive process is employed to reconstruct an image from the images 20-26 into a new image where the imperfections are reduced or eliminated. Col. 6, lines 40-59. By subtracting out the effects of the imperfections, an accurate map of the location of the imperfections, to which conventional fill-in algorithms are applied, is determined. Col. 3, line 57 to col. 4, line 14.

Based upon the forgoing summary, it is apparent that Edgar does not teach the claimed elements, as further explained below.

Claims 1, 13 and 18

Claim 1 recites "a deciding device for *selecting a correction method* from *among a plurality of types of correction methods* for correcting a defect portion, *or* for deciding a range of *application of each of at least two correction methods* correcting a defect portion."

The Examiner asserts that a correction method is disclosed by Edgar's "intensity of the imperfections," and further in Edgar col. 6, lines 39-58 and col. 6, lines 59-68. However, it is unclear how the "intensity of imperfections" teaches a correction method. It appears that the intensity of the imperfections is used to map the locations of the imperfections. Based on the determined location of the imperfections, a fill-in algorithm is used to correct the imperfection. Consequently, the mere "intensity of imperfections" does not teach a correction method. Further, the respective column and lines cited by the Examiner discuss obtaining an infrared, red, green and blue image in order to map out imperfections. At no point is a correction method disclosed, let alone that a correction method is selected from among a plurality of types of correction methods or a range of application for two correction methods. Moreover, to the extent an intensity of imperfections is known, it invokes a common correction and thus does not comprise selection from a plurality, or selection of a range for plural corrections as claimed.

For at least the above reasons, claim 1 and its dependent claims should be deemed allowable. Since claims 13 and 18 recite similar elements, claims 13 and 18 and their dependent claims should be deemed allowable for at least the same reasons.

Claims 11, 17 and 20

The Examiner asserts that Edgar col. 6, lines 59-68, col. 7, lines 1-9 and col. 9, lines 13-53 teach the elements of claim 11. The respective column and lines cited by the Examiner disclose that imperfections appear in equal intensity in red, green and blue images and that given the precise location of the imperfections in relation to the infrared image, the imperfections can be corrected. In particular, the exposure and intensity of the pixels at the imperfection areas are increased to obtain an improved image. Col. 9, lines 13-53.

However, there is no teaching or suggestion that "a calculation device for calculating a brightness alteration amount for correcting a defect portion in the image based on an amount of transmitted or reflected non-visible light *in an area adjacent to the defect portion* when light is irradiated onto the image recording material, and *a difference in the refractive indexes of visible light and non-visible light* in the image recording material," as recited in claim 11. For at least these reasons, claim 11 and its dependent claims should be deemed allowable. Since claims 17 and 20 recite similar elements, they should be deemed allowable for at least the same reasons.

III. Rejection of claims 8-10, 16 and 19 under 35 U.S.C. § 102

Claims 8-10, 16 and 19 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Hiramatsu (U.S. Patent No. 4,933,983).

Claim 8 recites "the feature amount calculation device being for calculating respective amounts of image features in *a plurality of different directions from within defect portions*."

The Examiner asserts that this aspect of the claim is disclosed in Hiramatsu col. 23, lines 12-50, col. 29, lines 60-68 and col. 30, lines 1-42. Col. 23, lines 12-50 discloses that the addresses of defects in a main scan line are fed from a defect map circuit 518 into a defect correction circuit 512. The length of the defect in the main scan direction is then determined. If the defect is short, the defect can be corrected by substituting the data with data of preceding picture elements or data in following picture elements or by linear interpolation. If the defect is long, the defect can be corrected by substituting video data of a preceding line by adjacent data in the direction of the subscan.

Col. 29, lines 60-68 and col. 30, lines 1-42 disclose a defect correction procedure. If the defect is short (two or less picture elements) then the defect is replaced with the picture element immediately before the defect. If the defect is long (3 or more picture elements) the first two picture elements of the defect are treated as short defects and are substituted with data from the picture element before the data. The defective data corresponding to the third or more picture element is regarded as a long defect and is replaced with preceding scan data. However, there is no indication that image features are calculated in a plurality of different directions from within

defect portions. Further, there is no teaching or suggestion that a final correction value is obtained based on amounts of image features of each direction calculated by the feature amount calculation device.

For at least the above reasons, claim 8 and its dependent claims should be deemed allowable. Since claims 16 and 19 recite similar elements, they should be deemed allowable for at least the same reasons.

IV. Claim Rejections under 35 U.S.C. § 103

Claim 12 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Edgar in view of Tung (U.S. Patent No. 3,758,193).

The Examiner states that Edgar does not disclose calculating a high frequency ratio and cites Tung col. 1, lines 55-63 and claim 1, to cure the deficiency. Further, the Examiner states that is it well known to one of ordinary skill in the art that this ratio could be used in order to see how much light is being affected by defects and it could then be used in a calculation to change the intensity.

Tung discloses an infrared-transmissive, visible-light-absorptive retro-reflector such as that used in retro-reflective signs, labels and coatings. See col. 1, lines 9-19. As opposed to the prior art, the retro-reflector disclosed in Tung reflects infrared radiation with good efficiency. The retro reflector includes a thin infrared-transmissive visible light absorptive layer which comprises an infrared-transmissive film and solid discrete pigments particles. The pigment particles lead to a good transmission of infrared radiation while substantially absorbing visible

light. The ratio of infrared radiation transmitted to the combined total of infrared radiation and visible light transmitted is at least 75% or more than 90%. See col. 1, lines 55-63.

However, there is no teaching or suggestion in Tung of extracting high frequency components, let alone that a feature amount is calculated based on "one of the type of image recording material and by calculating a ratio of a value obtained when high frequency components are extracted from a change in the amount of transmitted or reflected non-visible light in an area adjacent to the defect portion when non-visible light is irradiated onto the image recording material and a value obtained when high frequency components are extracted from a change in an amount of transmitted or reflected visible light in an area adjacent to the defect portion when visible light is irradiated onto the image recording material," as recited in claim 12.

Moreover, it would not be obvious to one of skill in the art to combine the retro-reflector for signs of Tung with the film defect mapping system of Edgar. For at least the above reasons, claim 12 should be deemed allowable.

V. New Claims

Applicant has added claims 21-24 to provide a more varied scope of protection. Claims 21-24 should be deemed allowable by virtue of their dependency to claims 1 and 8 for the reasons set forth above.

VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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